

CLAIMS

1. A dispenser for a volatile liquid, comprising:
a housing;
5 a fan mounted to the housing to generate an air stream;
a guide associated with the housing provides at least one boundary in defining
an opening in which the opening has a predetermined dimension to selectively receive
a wick and to position the wick in alignment with the fan to immerse the wick into an
air stream when the fan is activated.
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2. The dispenser of claim 1, wherein the guide comprises two spaced apart
projections extending from a surface of the housing.
3. The dispenser of claim 2, wherein the two projections are positioned in an
15 interior portion of the housing.
4. The dispenser of claim 2, wherein the two projections extend in the general
direction of the air stream generated by the fan.
- 20 5. The dispenser of claim 4, wherein the predetermined dimension is the distance
between the two projections.
6. The dispenser of claim 2, wherein the guide includes a second set of spaced
apart projections in which the two spaced apart projections and the second set of
25 projections are spaced apart from one another.
7. The dispenser of claim 6, wherein the second set of spaced apart projections
defines a second opening having a second pre-determined dimension to selectively
receive and to position a portion of the wick in alignment with the fan.
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8. The dispenser of claim 2, wherein the two spaced apart projections are positioned at an entrance of another opening defined in the housing.

9. The dispenser of claim 2, wherein the projections are positioned in the air
5 stream generated by the fan.

10. The dispenser of claim 2, wherein the projection is positioned in an interior portion of the housing.

10 11. The dispenser of claim 2, wherein the two spaced apart projections extend in the general direction of the air stream generated by the fan.

12. The dispenser of claim 2, wherein the two spaced apart projections are positioned in the air stream generated by the fan.

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13. The dispenser of claim 1, wherein the guide is integral with the housing.

14. The dispenser of claim 13, wherein the guide comprises opposing sidewalls defining another opening of the housing.

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15. The dispenser of claim 1, wherein the guide comprises a wall member surrounding the opening.

16. The dispenser of claim 15, wherein the wall member is positioned entirely
25 around the opening.

17. The dispenser of claim 1, wherein the guide includes a wall member positioned to surround a top portion of the wick.

18. The dispenser of claim 17 wherein the wall member is positioned entirely around the top portion of the wick.

19. The dispenser of claim 1, wherein the opening of the guide is positioned
5 relative to the fan to position the wick in alignment with a rotational axis of the fan.

20. The dispenser of claim 1, wherein the predetermined dimension of the opening is greater than a dimension of the wick.

10 21. The dispenser of claim 1, including a fan blade of the fan having a length R measured from an axis of rotation of the fan to the farthest end of the fan blade away from the axis of rotation and wherein the predetermined dimension of the opening does not exceed 1.25 R.

15 22. The dispenser of claim 21, wherein the predetermined dimension of the opening does not exceed 1.1 R.

23. The dispenser of claim 21, wherein the predetermined dimension of the opening does not exceed 0.9 R.

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24. The dispenser of claim 21, wherein the predetermined dimension of the opening does not exceed 0.7 R.

25 25. The dispenser of claim 21, wherein the predetermined dimension of the opening does not exceed 0.5R.

26. The dispenser of claim 1 wherein the wick has a dimension not to exceed 1.2 of a length R of a fan blade of the fan measured from an axis of rotation to a farthest end of the fan blade away from the axis of rotation.

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27. The dispenser of claim 26, wherein the dimension of the wick does not exceed R.
28. The dispenser of claim 26, wherein the dimension of the wick does not exceed 0.8R.
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29. The dispenser of claim 26, wherein the dimension of the wick does not exceed 0.6R.
- 10 30. The dispenser of claim 26, wherein the dimension of the wick does not exceed 0.4R.
31. The dispenser of claim 1, wherein the predetermined dimension of the opening is positioned generally transverse to an axis of rotation of the fan.
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32. The dispenser of claim 1, wherein the dispenser operates at room ambient temperature.
33. The dispenser of claim 1, wherein the guide is adapted to position the wick
20 within a cylindrical volume centered along an axis of rotation of the fan and having a radius which extends from the axis of rotation to the farthest extension of a fan blade of the fan.
34. The dispenser of claim 1 wherein the guide comprises a projection extending
25 from a surface of the housing and positioned spaced apart from another surface of the housing, and the opening comprises a separation between the projection and the other surface of the housing.

35. The dispenser of claim 34 wherein the projection is spaced apart from a rotational axis of the fan in a direction transverse to a direction in which the wick is received into the opening.

5 36. A method for assembling a dispenser for a volatile liquid, comprising the steps of:

providing a fan mounted to a housing; and

providing a guide associated with a housing in which the guide defines an opening having a predetermined dimension to selectively receive a wick and align the
10 wick to be immersed in an air stream when the fan is activated.

37. The method of claim 36 including the step of inserting a wick into the opening to be aligned with the fan.

15 38. The method of claim 36 in which the step of inserting includes positioning the wick in alignment with an axis of rotation of the fan.

39. The method of claim 38 in which the step of inserting includes providing the predetermined dimension to be larger than a dimension of the wick.

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40. The method of claim 36 includes providing the predetermined dimension of the opening not to exceed 1.25 of the length R of a fan blade of the fan measured from an axis of rotation of the fan to a farthest end of a fan blade away from the axis of rotation of the fan.

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41. The method of claim 40 in which the step of providing includes providing the predetermined dimension of the opening not to exceed 1.1 R.

42. The method of claim 40 in which the step of providing includes providing the
30 predetermined dimension of the opening not to exceed 0.9 R.

43. The method of claim 40 in which the step of providing includes providing the predetermined dimension of the opening not to exceed $0.7R$.
- 5 44. The method of claim 40 in which the step of providing includes providing the predetermined dimension of the opening not to exceed $0.5R$.
45. The method of claim 36, includes the step of providing the dimension of the wick not exceed 1.2 of the length R of a fan blade of the fan measured from an axis of
10 rotation of the fan to a farthest end of the fan blade away from the axis of rotation.
46. The method of claim 43, includes the step of providing the dimension of the wick not to exceed R .
- 15 47. The method of claim 43, includes the step of providing the dimension of the wick not to exceed $0.8R$.
48. The method of claim 43, includes the step of providing the dimension of the wick not to exceed $0.6R$.
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49. The method of claim 43, includes the step of providing the dimension of the wick not to exceed $0.4R$.
50. The method of claim 36 in which the step of providing a guide includes
25 positioning the wick within a cylindrical volume centered along an axis of rotation of the fan and having a radius which extends from the axis of rotation to the farthest end of a fan blade from the axis of rotation of the fan.

51. The method of claim 36 including the step of providing the predetermined dimension of the opening in an orientation generally transverse to an axis of rotation of the fan.

- 5 52. The method of claim 36 wherein the dispenser operates at room ambient temperature.